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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of	:	Customer Number: 46320
Wendell BOUKNIGHT et al.	:	Confirmation Number: 6588
Application No.: 10/716,688	:	Group Art Unit: 2452
Filed: November 19, 2003	:	Examiner: B. Whipple

For: AUTONOMIC ASSIGNMENT OF COMMUNICATION BUFFERS BY AGGREGATING SYSTEM PROFILES

APPEAL BRIEF

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This Appeal Brief is submitted in support of the Notice of Appeal filed November 30, 2008, and further in response to the Examiner reopening prosecution in the Office Action dated February 24, 2009, wherein Appellants appeal from the Examiner's rejection of claims 1-3, 14-16, and 19-26.

I. REAL PARTY IN INTEREST

This application is assigned to IBM Corporation by assignment recorded on June 24, 2004, at Reel 014775, Frame 0612.

II. RELATED APPEALS AND INTERFERENCES

Appellants are unaware of any related appeals and interferences.

III. STATUS OF CLAIMS

Claims 1-3 and 14-16 are pending and three-times rejected in this Application. Claims 4-13 and 17-18 have been cancelled. New claims 19-26 correspond to previously cancelled claims 6-13 (see next section regarding Status of Amendments). It is from the multiple rejections of claims 1-3 and 14-16 that this Appeal is taken.

IV. STATUS OF AMENDMENTS

An Amendment was submitted on May 26, 2009, which addressed an objection raised by the Examiner in the Third Office Action dated March 24, 2009 (hereinafter the Third Office Action). The Amendment also reintroduced previously-cancelled claims 6-13 as new claims 19-26. Appellants proceed on the basis that this Amendment will be entered since the Third Office Action was not final.

V. SUMMARY OF CLAIMED SUBJECT MATTER

Referring to Figure 2 and also to independent claim 1, and autonomic buffer configuration method is disclosed. In 210A-D, data flowing through buffers in a communications system is monitored (lines 3-6 of paragraph [0026]). In block 210A, different data sizes for different ones of said data flowing through said buffers are recorded in at least one buffer profile during an established interval of time (lines 6-9 of paragraph [0026]). In step 230, an optimal buffer size is computed based upon a specification of a required percentage of times a buffer must be able to accommodate data of a particular size (lines 2-10 of paragraph [0028]). In block 240, at least one of said buffers is resized without re-initializing said at least one resized buffer (lines 10-11 of paragraph [0028]).

Referring to Figure 2 and also to independent claim 14, a machine readable storage having stored thereon a computer program for autonomic buffer configuration is disclosed. The computer program comprising a routine set of instructions, which when executed by the machine, cause the machine to perform the following steps. In 210A-D, data flowing through buffers in a communications system is monitored (lines 3-6 of paragraph [0026]). In block 210A, different data sizes for different ones of said data flowing through said buffers are recorded in at least one buffer profile during an established interval of time (lines 6-9 of paragraph [0026]). In step 230, an optimal buffer size is computed based upon a specification of a required percentage of times a buffer must be able to accommodate data of a particular size (lines 2-10 of paragraph [0028]). In block 240, at least one of said buffers is resized without re-initializing said at least one resized buffer (lines 10-11 of paragraph [0028]).

Referring to Figure 1 and also to independent claim 19, a profile processor device 200 disposed within an autonomic buffer configuration system is disclosed. The profile processor 200 device comprises a performance monitor 160, a reporting tool, a buffer size calculator, and a buffer resizing component. The performance monitor 160 is arranged to monitor data 140 flowing through at least one buffer 150 in a communications system 110 (lines 1-7 of paragraph [0024]). The reporting tool is configured to generate at least one buffer profile 170 based upon monitored information produced by the performance monitor 160 (lines 11-12 of paragraph [0024]). The buffer size calculator is programmed to compute an optimal buffer size for the at least one buffer 150 based upon the at least one buffer profile 170 (lines 1-5 of paragraph [0025]). The buffer resizing component is coupled to the at least one buffer 150 and programmed to dynamically resize the at least one buffer 150 to the optimal buffer size without re-initializing the buffer 150 (lines 5-9 of paragraph [0025]).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

1. Claims 19-26 were rejected under 35 U.S.C. § 101; and

2. Claims 1-3 and 14-16 were rejected under 35 U.S.C. § 103 for obviousness based upon Bakshi et al., U.S. Patent No. 6,836,785 (hereinafter Bakshi), in view of Dupont, U.S. Patent No. 6,842,800, and Koval et al., U.S. Patent No. 5,339,413 (hereinafter Koval).

VII. ARGUMENT

THE REJECTION OF CLAIMS 19-26 UNDER 35 U.S.C. § 101

For convenience of the Honorable Board in addressing the rejections, claims 20-26 stand or fall together with independent claim 19.

Since the Examiner rejected claims 6-13 (substantially identical to new claims 19-26) on pages 3 and 4 of the First Office Action, Appellants presume that the Examiner is maintaining the rejection. Specifically, on page 4 of the First Office Action, the Examiner asserted the following:

> Claims 6-13 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The profile processor of claim 6 may be implemented merely in software (see instant specification, [0029], ln. 1-2). Software alone fails to fall into one of the four statutory classes of invention: process, machine, manufacture, and composition of matter.

Appellants respectfully submit that the Examiner's analysis is in error.

At the outset, Appellants disagree with the Examiner's claim construction. "[C]laim construction … is an important first step in a § 101 analysis." In re Bilski, 545 F.3d 943 (Fed. Cir. 2008) (en banc). During patent examination, the pending claims must be "given their broadest reasonable interpretation consistent with the specification." In re Hyatt, 211 F.3d 1367, 1372, 54 USPQ2d 1664, 1667 (Fed. Cir. 2000). However, "it is important not to import into a claim limitations that are not part of the claim." E.g., Superguide Corp. v. DirecTV Enterprises, Inc., 358 F.3d 870, 875, 69 USPQ2d 1865, 1868 (Fed. Cir. 2004); Liebel-Flarsheim Co. v. Medrad Inc., 358 F.3d 898, 906, 69 USPQ2d 1801, 1807 (Fed. Cir. 2004). The Examiner's analysis,, however, has improperly incorporated limitations from the specification into the claims.

Lines 1-2 of paragraph [0029] of Appellants specification states that "[t]he present invention can be realized in hardware, software, or a combination of hardware or software." By referring to this passage, instead of the claim language, which recites "[a] profile processor device," the Examiner has improperly imported limitations from the specification into the claim by attempting to incorporate the phrase "software" into the language of the claims. The Examiner's attempt notwithstanding, as stated within In re Bilski[1], "the Court has made clear that it is inappropriate to determine the patent-eligibility of a claim as a whole based on whether selected limitations constitute patent-eligible subject matter." Thus, even if the claimed invention recited software *per se*, the recitation of software *per se* alone is not automatically fatal to the whether or not the claim, as a whole, recites statutory subject matter. Therefore, the Examiner's sole reliance upon the alleged recitation of "software *per se*" within the claim as being dispositive as to whether or not the claim recites statutory subject matter, without considering the claimed invention as a whole, constitutes reversible error.

Moreover, the Examiner appears to be reading more into Appellants' specification than actually exists. Appellants' reference is to software and not to "software *per se*." Instead, Appellants' discussion of software relates to the most commonly-used definition of software, which is a computer program stored on a machine readable storage (e.g., a computer readable medium) – an example of which is the software one can go to their local "big box electronic store" and purchase (e.g., a CD or DVD upon which the computer readable code is stored). This type of "software" has long been recognized as being patentable subject matter. In re Beauregard, 53 F.3d 1583 (Fed. Cir. 1995).

[1] 545 F.3d 943 (Fed. Cir. 2008) (en banc).

Notwithstanding the Examiner's failure to properly construe the language of the claims, the claimed invention includes functional components, which necessarily have structure. For example, the performance monitor is arranged (i.e., has an arrangement) to monitor data from through a buffer in a communications system. Such a monitor necessarily requires hardware to connect to the buffer in order to monitor the buffer. Since the claimed buffer size calculator is programmed and only hardware is programmed (on the contrary, software, *per se*, is the program), then the claimed buffer size calculator is also a device. Finally, the buffer resizing component is coupled to at least one of the buffers. Both being a component (i.e., a device) and being coupled (i.e., to be attached) also implies hardware. All of these components perform a function, which software, per se, is incapable of performing. Thus, the claimed invention is not directed to software, per se, as alleged by the Examiner.

In this regard, Appellants refer to the non-precedential opinion of Ex parte Kwasi (Appeal No. 2008-002519), in which the Honorable Board held the following:

> Appellants assert that "[t]he claimed invention ... is not directed to software *per se*, but instead, to a system ... [that] includes functional components" (App. Br. 5). We agree with Appellants. Claims 7 and 8 recite a system comprising an installation engine and processor. While the Examiner states that the claimed system "can be ... interpreted as ... software per se" (Ans. 3), the Examiner has not demonstrated how an engine and a processor, which appears to be hardware components, are merely "software *per se*".
>
> Accordingly, we conclude that Appellants have met their burden of showing that the Examiner erred in rejection claims 7 and 8 with respect to issue #1.

THE REJECTION OF CLAIMS 1-3 AND 14-16 UNDER 35 U.S.C. § 103 FOR OBVIOUSNESS BASED UPON BAKSHI IN VIEW OF DUPONT AND KOVAL

For convenience of the Honorable Board in addressing the rejections, claims 2-3 and 14-16 stand or fall together with independent claim 1. Newly added claims 19-26 also stand or fall

together with independent claim 1.

As is evident from Appellants' previously-presented comments during prosecution of the present Application and from Appellants' comments below, there are questions as to how the limitations in the claims correspond to features in the applied prior art. In this regard, reference is made to M.P.E.P. § 1207.02, entitled "Contents of Examiner's Answer." Specifically, the following is stated:

> (A) CONTENT REQUIREMENTS FOR EXAMINER'S ANSWER. The examiner's answer is required to include, under appropriate headings, in the order indicated, the following items:
>
> ...
>
> (9)(c) For each rejection under 35 U.S.C. 102 or 103 where there are questions as to how limitations in the claims correspond to features in the prior art even after the examiner complies with the requirements of paragraphs (c) and (d) of this section, the examiner must compare at least one of the rejected claims feature by feature with the prior art relied on in the rejection. The comparison must align the language of the claim side-by-side with a reference to the specific page, line number, drawing reference number, and quotation from the prior art, as appropriate. (emphasis added)

Therefore, if the Examiner is to maintain the present rejections and intends to file an Examiner's Answer, the Examiner is required to include the aforementioned section in the Examiner's Answer.

On October 10, 2007, the Patent Office issued the "Examination Guidelines for Determining Obviousness Under 35 U.S.C. 103 in View of the Supreme Court Decision in KSR International Co. v. Teleflex Inc.," 72 Fed. Reg. 57,526 (2007) (hereinafter the Examination Guidelines). Section III is entitled "Rationales To Support Rejections Under 35 U.S.C. 103." Within this section is the following quote from the Supreme Court: "rejections on obviousness grounds cannot be sustained by merely conclusory statements; instead there must be some

articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." KSR Int'l Co. v. Teleflex Inc., 127 S. Ct. 1727, 1741 (2007) (quoting In re Kahn, 441 F.3d 977, 988 (Fed. Cir. 2006)).

Referring to the first column on page 57,529 of the Examination Guidelines for Determining Obviousness, the following is a list of rationales that may be used to support a finding of obviousness under 35 U.S.C. § 103:

> (A) Combining prior art elements according to known methods to yield predictable results;
>
> (B) Simple substitution of one known element for another to obtain predictable results;
>
> (C) Use of known technique to improve similar devices (methods, or products) in the same way;
>
> (D) Applying a known technique to a known device (method, or product) ready for improvement to yield predictable results;
>
> (E) "Obvious to try" - choosing from a finite number of identified, predictable solutions, with a reasonable expectation of success;
>
> (F) Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces if the variations would have been predictable to one of ordinary skill in the art;
>
> (G) Some teaching, suggestion, or motivation in the prior art that would have led one of ordinary skill to modify the prior art reference or to combine prior art reference teachings to arrive at the claimed invention.

Upon reviewing the Examiner's analysis on pages 5-7 of the Third Office Action, the Examiner appears to be employing rationale (G). However, the Examiner's analysis is not entirely clear as to what rationale the Examiner is employing. As such, Appellants request that the Examiner

clearly identify the rationale, as described in the Examination Guidelines for Determining Obviousness, being employed by the Examiner in rejecting the claims under 35 U.S.C. § 103.

Referring again to rationale (G), as discussed on page 57,534 of the Examination Guidelines, the following findings of fact must be articulated by the Examiner:

> (1) a finding that there was some teaching, suggestion, or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings;
>
> (2) a finding that there was reasonable expectation of success; and
>
> (3) whatever additional findings based on the Graham factual inquiries may be necessary, in view of the facts of the case under consideration, to explain a conclusion of obviousness.

Referring to the paragraph entitled "Office Personnel as Factfinders" on page 57,527 of the Examination guidelines, the following was stated:

> Office personnel fulfill the critical role of factfinder when resolving the *Graham* inquiries. It must be remembered that while the ultimate determination of obviousness is a legal conclusion, the underlying *Graham* inquiries are factual. When making an obviousness rejection, Office personnel must therefore ensure that the written record includes findings of fact concerning the state of the art and the teachings of the references applied. In certain circumstances, it may also be important to include explicit findings as to how a person of ordinary skill would have understood prior art teachings, or what a person of ordinary skill would have known or could have done. Factual findings made by Office personnel are the necessary underpinnings to establish obviousness.

In Graham v. John Deere Co., 383 U.S. 1, 148 USPQ 459 (1966), the Supreme Court set forth the factual inquiries that are to be applied when establishing a background for determining obviousness under 35 U.S.C. 103. These factual inquiries are summarized as follows:

(A) Determine the scope and content of the prior art;
(B) Ascertain the differences between the prior art and the claims at issue;
(C) Resolve the level of ordinary skill in the pertinent art; and
(D) Evaluate any indicia of nonobviousness.

However, in order to make a proper comparison between the claimed invention and the prior art, the language of the claims must first be properly construed. See In re Paulsen, 30 F.3d 1475, 1479 (Fed. Cir. 1994). See also, Panduit Corp. v. Dennison Mfg. Co., 810 F.2d 1561, 1567-68 (Fed. Cir. 1987) (In making a patentability determination, analysis must begin with the question, "what is the invention claimed?" since "[c]laim interpretation, ... will normally control the remainder of the decisional process.") See Gechter v. Davidson, 116 F.3d 1454, 1460 (Fed. Cir. 1997) (requiring explicit claim construction as to any terms in dispute).

Upon reviewing the Examiner's analysis in view of the requirements discussed above necessary for the Examiner to establish a prima facie case of obviousness, Appellants recognize numerous deficiencies in the Examiner's analysis.

Claim 1

The Examiner asserted that Bakshi teaches the claimed "computing an optimal buffer size based upon a specification of a required percentage." This assertion, however, is not correct. The claimed invention must be considered as a whole. By parsing the phrase "a required percentage"

from "a required percentage of times a buffer must be able to accommodate data of a particular size," the Examiner is misconstruing the term "required percentage." Moreover, the teachings of Bakshi do not even teach a "required percentage." The percentage referred to in Bakshi is not "required." Instead, the percentage is just a number that alters the capacity of the buffer 302. Therefore, the Examiner has mischaracterized the scope and content of the teachings of Bakshi.

Regarding the claimed "required percentage of times a buffer must be able to accommodate data of a particular size," in the third full paragraph on page 6 of the Third Office Action, the Examiner identified column 3, lines 24-34 of Dupont as teaching these limitations. This passage, however, does not teach what the Examiner purports this passage to teach. Instead, this passage teaches that a buffer memory allocator 80 uses packet size information to determine how many of a number of buffer units of each type to allocate. Entirely absent from the teachings of Dupont is the notion of computing an optimal buffer size. Instead, Dupont acts by changing the number of buffers of a particular type.

The question of obviousness does not resolve on whether or not the Examiner can identify within the teachings of the applied prior art the individual elements of the claimed invention. Instead, the question of obviousness resolves on what common sense modifications the applied prior art suggests to one having ordinary skill in the art at the time of the invention. Moreover, the suggested modifications must also result in a reasonable expectation of a predictable result.

Referring to the paragraph spanning pages 6 and 7 of the Third Office Action, the Examiner's proposed benefit for the combination of Bakshi and Dupont is "to efficiently allocate buffers for the storage of variable-sized data packets." The Examiner's proposed benefit, however, completely ignores the teachings of Bakshi. Based upon the teachings of Bakshi, whether or not data is efficiently allocated within the buffer 302 is not important. Bakshi varies the size of the buffer to change the delay time of requests waiting in the queue (see column 4, lines 35-44). By decreasing the buffer size, less requests are queued, which reduces the delay time. Therefore, for the reasons described above, Appellants' position is that one having ordinary skill in the art would not have recognized that the claimed invention, as recited in claims 1 and 14, is obvious in view of the combination of Bakshi and Dupont.

The above arguments (incorporated herein) were substantially previously presented on pages 7 and 8 of the First Response dated June 23, 2008 (hereinafter the First Response) and in the First Appeal Brief. The Examiner's response to Appellants' arguments are found on pages 2-4 of the Second Office Action in the section entitled "Response to Arguments."

In the first full paragraph on page 3 of the Second Office Action, the Examiner asserted the following:

> Additionally, Applicant argues the Examiner improperly parses "a required percentage" from "a required percentage of times a buffer must be able to accommodate data of a particular size." The Examiner points out that Dupont is relied upon to disclose the language, "a required percentage of times a buffer must be able to accommodate data of a particular size", in its entirety (Col. 3, ln. 24-34).

For ease of reference, the Examiner's cited passage of column 3, lines 24-34 of Dupont is reproduced below:

> The buffer memory allocator 80 is responsible for allocating the buffer units of varying sizes within the buffer memory 50. The buffer memory allocator 80 uses the packet size

> information obtained by the packet monitor 60 to determine the number of buffer units of each type to allocate. For example, the packet monitor 60 may determine that N packets of size s, and M packets of size b have been received recently. As illustrated in FIG. 2, the buffer memory allocator 80 may then allocate the memory in the buffer storage section 50 to form N buffer units of size s 90 and M buffer units of size b 100.

Also for ease of reference, the claim limitation at issue is:

> computing an optimal buffer size based upon a specification of a required percentage of times a buffer must be able to accommodate data of a particular size.

Notwithstanding the Examiner's assertion that column 3, lines 24-34 of Dupont teaches all of the limitations at issue, Appellants respectfully disagree. The concept of "a required percentage" is absent from this teaching. The term "percentage" or any analogous teaching is completely missing from the Examiner's cited passage. Based upon the cited teachings of Dupont, there is no factual support that Dupont would have considered "a required percentage of times a buffer must be able to accommodate data of a particular size" as a factor to be used in computing an optimal buffer size. Thus, the Examiner has mischaracterized the scope and content of Dupont, and in so doing, the Examiner has failed to set forth a proper *Graham* analysis.

In the second full paragraph on page 3 of the Second Office Action, the Examiner asserted the following:

> Applicant further argues Dupont's cited section (see the preceding paragraph) fails to disclose computing an optimal buffer size. Firstly, Examiner points out that Bakshi is relied upon to disclose this language (Col. 4, ln. 12-16). Secondly, Dupont also discloses computing an optimal buffer size (Col. 3, ln. 24-34).

Appellants recognize that Bakshi teaches computing an optimal buffer size. However, assuming arguendo that Dupont teaches computing an optimal buffer size based upon the teachings of

column 3, lines 24-34, the Examiner's analysis has failed to consider the claimed invention, as a whole. Specifically, the Examiner has failed to explain why one skilled in the art would modify Bakshi's method of calculating an optimal buffer size with Dupont's method of calculating an optimal buffer size. Moreover, as will be discussed in greater detail below, one having ordinary skill in the art would not make such a combination.

In the last full paragraph on page 3 of the Second Office Action, the Examiner asserted the following:

> Applicant argues it would not be obvious to modify Bakshi with Dupont, because Bakshi is concerned with decreasing the buffer size. Examiner recognizes this and points out that Dupont is also concerned with decreasing buffer size (Col. 4, ln. 39-43, "small packets do not have to be stored in large buffer units that could otherwise hold a data packet"). Therefore, it would have been obvious to monitor buffer size in the manner taught by Dupont as it would help Bakshi decrease the buffer size. Additionally, Bakshi's decreasing of buffer size is in response to an overloaded state (Abstract). Therefore, ensuring efficient allocation of buffer size initially would help prevent such an overloaded state.

The Examiner's proposal to modify the teachings of Bakshi in view of Dupont render Bakshi inoperable for its intended purpose. Combinations of references that render a prior art device inoperable or fundamentally change the manner of operation of the device have not previously supported a finding of obviousness. See In re Ratti, 270 F.2d 810, 813 (CCPA 1959) ("This suggested combination of references would require a substantial reconstruction and redesign of the elements shown [in the prior art] as well as a change in the basic principles under which [the prior art] construction was designed to operate"), In re Gordon, 733 F.2d 900, 902 (Fed. Cir. 1984) ("the [prior art] apparatus … would be rendered inoperable for its intended purpose").

Contrary to the Examiner's assertion, Appellants did not simply argue "it would not be obvious to modify Bakshi with Dupont, because Bakshi is concerned with decreasing the buffer size." Instead, as argued on page 8, lines 9-11 of the First Response and reproduced above, Bakshi varies the size of the buffer to change the delay time of requests waiting in the queue (see column 4, lines 35-44).

To further clarify this point, Bakshi teaches varying the size of the buffer depending upon the overload status of the server (column 1, lines 49-54). If the server is not overloaded, the buffer can be large (column 1, lines 54-56). However, if the server is overloaded for a predetermined amount of time, the size of the buffer can be reduced, which reduces the number of requests being stored. Subsequently, when the buffer is full, any additional requests arriving at the buffer will be discarded or blocked (column 1, lines 56-61). When the number of requests held in the buffer are reduced (i.e., by reducing the size of the buffer), the delay time for any request entering the buffer can be reduced (column 1, lines 62-64). In this manner, even if the server runs at full capacity, the delay time can be reduced for requests in the buffer (column 1, line 64 through column 2, line 3).

Another important concept to be considered with regard to the teachings of Bakshi is that Bakshi deals with "requests" whereas Dupont acts on "data packets" of an unknown size. As would be recognized by one skilled in the art, a "request" is a specific type of "data packet" with a size that is generally known. As such, referring to column 4, lines 19-22 and column 5, lines 48-49 of Bakshi, the buffer can be sized in number of incoming requests (e.g., "25 incoming requests," "100 incoming requests") instead of an absolute size of the buffer. If the size of the

request was overly variable, Bakshi would not be able to characterize the size of the buffer by the number of incoming requests.

The teachings of Dupont, however, are very different from Bakshi and address a problem not applicable to the teachings of Bakshi. Specifically, Dupont is directed to a buffering system in which data packets of varying sizes are received (column 1, lines 55-56). For example, referring to Fig. 3 of Dupont and column 3, line 60 through column 4, line 14, a buffer memory 50 can be split into three buffer sections 52, 54, 56 respectively having different sizes a, b, c. As a data packet is received, the data packet is allocated to a particular buffer section 52, 54, 56 based upon the size of the data packet. For example, a data packet with a size smaller than a will be directed to buffer section 52. A data packet with a size larger than b but smaller than c will be directed to buffer section 54, and a data packet with a size larger than c will be directed to buffer section 56.

Referring to column 2, line 35 through column 3, line 67, much of Dupont's teachings are directed to how the buffer sections are allocated in terms of size and number. In a preferred aspect, Dupont teaches that a packet monitor 60 monitors incoming data packets to track the size of all the data packets and to track the frequency at which specific packet sizes are received (column 2, lines 47-49). Referring to column 3, lines 24-39, a buffer memory allocator 80 utilizes the packet size information obtained by the packet monitor 60 to allocate the buffer sections by both number of units and by size.

Upon considering the teachings of Bakshi and Dupont, as a whole, one having ordinary

skill in the art would recognize that combining Bakshi and Dupont would not be desirable. Although Bakshi is unclear as to this fact, the "requests" of Bakshi are either variable in size or consistent in size. If the requests of Bakshi are variable in size, and the teachings of Dupont are applied to Bakshi, Bakshi would not be able to resize the capacity of the buffer while still having an accurate knowledge of the acceptance limit of the buffer as a whole since the buffer may have a different acceptance limit depending upon the size of the request being submitted and whether there is a buffer section (of the appropriate size) available to store the request.

However, if the requests of Bakshi are similar in size, as evident by the presumptions being employed by Bakshi in calculating the acceptance limit, then the teachings of Dupont would not provide any benefit. If all the data packet sizes are the same, then the result of Dupont's analysis would be allocate all buffer sections with the same size – the size of the request. Therefore, Appellants' position is that one having ordinary skill in the art, when considering modifying Bakshi in view of Dupont, would have recognized that no benefit would be realized by this combination based upon the assumptions being employed by Bakshi.

The above reproduced arguments (incorporated herein) were previously presented in the First Appeal Brief. The Examiner's analysis, however, has failed to address any of the aforementioned arguments. Instead, the Examiner's reopening of prosecution is to address Appellants' prior argument that neither Bakshi nor Dupont teach the claimed plurality of buffers (i.e., "monitoring data flowing through buffers in a communication process").

In the present Third Office Action, the Examiner relies upon the newly-added tertiary

reference of Koval, which teaches "a plurality of buffers that are used to efficiently stream or transfer data in real-time." Assuming arguendo that the Examiner has addressed this particular limitation with the added teachings of Koval, the Examiner's analysis completely ignores the remainder of the arguments presented by Appellants within the First Appeal Brief.

Conclusion

Based upon the foregoing, Appellants respectfully submit that the Examiner's rejections under 35 U.S.C. §§ 101, 103 are not viable. Appellants, therefore, respectfully solicit the Honorable Board to reverse the Examiner's rejections under 35 U.S.C. §§ 101, 103.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due under 37 C.F.R. §§ 1.17, 41.20, and in connection with the filing of this paper, including extension of time fees, to Deposit Account 09-0461, and please credit any excess fees to such deposit account.

Date: July 27, 2009

Respectfully submitted,

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VIII. CLAIMS APPENDIX

1. An autonomic buffer configuration method comprising the steps of:

monitoring data flowing through buffers in a communications system;

recording in at least one buffer profile different data sizes for different ones of said data flowing through said buffers during an established interval of time;

computing an optimal buffer size based upon a specification of a required percentage of times a buffer must be able to accommodate data of a particular size; and,

re-sizing at least one of said buffers without re-initializing said at least one resized buffer.

2. The method of claim 1, wherein said recording step further comprises varying delays between consecutive input/output operations in said communications system to affect how much data flows between said communications system and an application coupled to said communications system.

3. The method of claim 1, wherein said monitoring step comprises the step of monitoring said data for each connection in said communications system.

14. A machine readable storage having stored thereon a computer program for autonomic buffer configuration, the computer program comprising a routine set of instructions which when executed by the machine cause the machine to perform the steps of:

monitoring data flowing through buffers in a communications system;

recording in at least one buffer profile different data sizes for different ones of said data flowing through said buffers during an established interval of time;

computing an optimal buffer size based upon a specification of a required percentage of times a buffer must be able to accommodate data of a particular size; and,

re-sizing at least one of said buffers without re-initializing said at least one resized buffer.

15. The machine readable storage of claim 14, wherein said recording step further comprises varying delays between consecutive input/output operations in said communications system to affect how much data flows between said communications system and an application coupled to said communications system.

16. The machine readable storage of claim 14, wherein said monitoring step comprises the step of monitoring said data for each connection in said communications system.

19. A profile processor device disposed within an autonomic buffer configuration system comprising:

a performance monitor arranged to monitor data flowing through at least one buffer in a communications system;

a reporting tool configured to generate at least one buffer profile based upon monitored information produced by said performance monitor;

a buffer size calculator programmed to compute an optimal buffer size for said at least one buffer based upon said at least one buffer profile; and,

a buffer resizing component coupled to said at least one buffer and programmed to dynamically resize said at least one buffer to said optimal buffer size without re-initializing said buffer.

20. The profile processor device of claim 19, wherein said at least one buffer is selected from the group consisting of an profile processor application-level buffer and a kernel-level buffer.

21. The profile processor device of claim 19, wherein said data comprises at least one of requests and responses to said requests.

22. The profile processor device of claim 19, wherein said communications system is disposed within one of a Web server and an applications server.

23. The profile processor device of claim 20, wherein said performance monitor comprises a configuration for performing an analysis of an amount of data passed between said application-layer buffer and said kernel-layer buffer.

24. The profile processor device of claim 21, wherein said performance monitor comprises a configuration for performing at least one of (1) a statistical analysis of request sizes for an interval of time for said communications system, (2) a statistical analysis of request sizes for an interval of time for individual connections in said communications system, (3) a statistical analysis of inserting delay durations of varying lengths between consecutive input/output

operations in said communications system, and (4) a statistical analysis of patterns of requests and an ordering of said requests in said patterns.

25. The profile processor device of claim 19, wherein said monitored information is weighted in said at least one buffer profile.

26. The profile processor device of claim 19, further comprising a profile aggregator configured to combine individual buffer profiles to produce a single profile for use by said calculator in computing an optimal buffer size.

IX. EVIDENCE APPENDIX

No evidence submitted pursuant to 37 C.F.R. §§ 1.130, 1.131, or 1.132 of this title or of any other evidence entered by the Examiner has been relied upon by Appellants in this Appeal, and thus no evidence is attached hereto.

X. RELATED PROCEEDINGS APPENDIX

Since Appellants are unaware of any related appeals and interferences, no decision rendered by a court or the Board is attached hereto.